B) AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method for correlating MR images with physiological data, the steps comprising:

~~a)~~ providing a physiological data pipeline ~~200~~;

~~b)~~ acquiring physiological data ~~202~~ through the physiological data pipeline;

~~c)~~ providing an MR data pipeline;

~~d)~~ utilizing data acquired in the physiological data pipeline to trigger the acquisition of data within the MR data pipeline; ~~and~~

~~e)~~ acquiring MR data through the MR data pipeline;

providing a visual display; and

displaying physiological data and MR data on the same visual display.

~~wherein a visual display correlation of the physiological data on an MR image is obtained.~~

2. (Currently Amended) The method as recited in claim 1 wherein said physiological data acquisition step ~~includes~~ further comprises the step of acquiring all or part of a physiological waveform.

3. (Currently Amended) The method as recited in claim 2 wherein said physiological data acquisition step further ~~includes~~ comprises the step of calculating a trigger from data acquired in the physiological data pipeline.

4. (Currently Amended) The method as recited in claim 3, ~~including~~ further comprising the step of ~~the following step~~:

~~f)~~ reconstructing MR data within the MR data pipeline after the MR data acquisition st p.

5. (Currently Amended) The method as recited in claim 4, ~~including~~ further comprising the ~~following~~ step of:

~~g)~~ storing MR data within the MR data pipeline after the MR data reconstruction step.

6. (Cancelled)

7. (Currently Amended) A method for correlating MR images with physiological data, the steps comprising:

~~a)~~ providing a physiological data pipeline;

~~b)~~ acquiring physiological data through the physiological data pipeline;

~~c)~~ providing an MR data pipeline;

~~d)~~ providing time synchronization across the physiological data pipeline and the MR data pipeline to trigger the acquisition of data within the MR data pipeline; ~~and~~

~~e)~~ acquiring MR data through an MR data pipeline;

providing a visual display; and

displaying physiological data and MR data on the same visual display.

~~wherein a visual display correlation of the physiological data on an MR image is obtained.~~

8. (Currently Amended) The method as recited in claim 7 wherein said physiological data acquisition step ~~includes~~ further comprises the step of acquiring all or part of a physiological waveform.

9. (Currently Amended) The method as recited in claim 8 wherein said time synchronization providing step ~~includes~~ further comprises providing timers and using simplified n twork tim protocol to synchronize said timers.

10. (Currently Amended) The method as recited in claim 9, ~~including~~ further comprising the step of ~~the following step~~:

~~f)~~ reconstructing MR data within the MR data pipeline after the MR data acquisition step.

11. (Currently Amended) The method recited in claim 10, ~~including~~ further comprising: ~~the following step;~~

~~g)~~ providing a data store process and storing MR data within the MR data pipeline data store process.

12. (Currently Amended) The method recited in claim 11, ~~including~~ further comprising the ~~following~~ step of:

~~h)~~ providing a separate data conduit for sending physiological data to the data store process.

13. (Cancelled)

14. (Currently Amended) A system for correlating MR images with physiological data such that a visual display of the physiological data on the MR image is obtained, which comprises:

~~a)~~ a physiological acquisition controller, said physiological acquisition controller including the ability to digitize physiological signals received by it;

~~b)~~ a physiological signal processing unit;

~~c)~~ an application gateway processor;

~~d)~~ a scan control processor for controlling external components of an MR d vice said scan control processor further including means for storing

physiological waveform s gments and said application gateway processor includes means for notifying the scan control processor that a given waveform segment has been used as a trigger whereby on associated trigger number and timestamp is forwarded to the operator interface;

~~e)~~ an acquisition processing system; and

~~f)~~ an operator interface.

15. (Currently Amended) The image correlation system of claim 14 wherein said physiological signal processing unit ~~includes~~ further comprises means for receiving physiological data from the physiological acquisition controller.

16. (Currently Amended) The image correlation system of claim 15 wherein said physiological signal processing unit ~~includes~~ further comprises means for receiving physiological data in the form of a physiological waveform.

17. (Currently Amended) The image correlation system of claim 16 wherein said physiological signal processing unit further ~~includes~~ further comprises means for providing a trigger for data acquisition, said trigger being readable by the application gateway processor.

18. (Cancelled)

19. (Currently Amended) The image correlation system of claim 17 wherein said application gateway processor ~~includes~~ further comprises means for providing time synchronization between a physiological waveform chain and an MR image chain.

20. (Currently Amended) The image correlation system of claim 19 wherein said application gateway processor ~~includes~~ further comprises means for

providing th scan control processor with the tim stamp associated with the original trigger.